

sterling, and it is very probable that if proper steps were taken round trip fares could be obtained for seventy-five pounds. It will require another hundred pounds to support a man here for six or eight months. Board, room, washing, and servant cost about \$45 per month. It must of course be remembered that the table is free, providing we get a grant which will enable a man to come here. There is no question as to the wealth of material, and I trust that sufficient interest can be aroused to give Americans a chance to utilize it. Various German societies have already acted in the matter."

"As for climate and its effects on one's health, I need only say that I work with the microscope from 6:30 A.M. to 8:30 A.M., and from from 9:30 A.M. until 1:30 P.M. After 8 P.M. attempts at work bring on sleeplessness, which must be avoided. . . . I find it easy to get everything needed here in the way of apparatus, literature, etc. There are chemical, entomological, and botanical laboratories within easy reach, and a fine library, where most of the important botanical journals are kept on file. Everything is conducive to good work; in fact in this respect the place is the best I have so far seen."—
B. T. GALLOWAY, *Washington, D. C.*

ON THE USE OF THE TERM "FROND" AS APPLIED TO FERNs.

To the Editors of the Botanical Gazette:—One of the greatest annoyances of my early experience with fern literature was caused by the use of terms in a double sense. This was especially objectionable and confusing in the use of the term *frond* which was applied indiscriminately to the leafy portion and footstalk combined, and to the leafy part alone, so that it was not always possible to tell just which was meant by the use of the term.

It seemed to me that botanical terms should have but one definite meaning and be used in that sense alone.

Accordingly when in 1881 I prepared a rough plan for a text-book and synopsis of North American ferns I adopted the method of using terms in a single sense only, and I have adhered to that method in my own practice ever since.

Recently I have taken up my manuscript again with the hope of being able to get it ready for publication, but as I may not be able to do so and as the adoption of the word *leaves* for *fronds* in the same objectionable double sense by the new flora in its treatment of the ferns is only another method of retaining the same confusion, I offer the following extract from my manuscript as an expression of my views:

"A frond in its highest state of development consists of two parts, a leaf-like expansion that is the equivalent of the blade of a leaf, and a footstalk that is the equivalent of the petiole of a leaf. The expanded leafy portion is

always the most conspicuous part, just as the blade of a leaf is its most prominent feature, and it is very generally regarded as the frond itself. The term frond, therefore, is generally used in that sense as well as in its own. But the objection to this is that in practice it does not express clearly enough the exact meaning intended. This is especially true when the term frond is used in descriptions of proportion, as for example, when it is said that a frond is six inches tall, meaning thereby the leafy portion only, and the length of the stalk is given separately at four inches, as if it was distinct from the frond, whereas the stalk is an essential part of the frond itself, which would be described better by saying that it was ten inches tall, thus including its footstalk and giving its true length. Then if the proportion of each part was wanted it could be given separately under special terms, and the sum of both would conform to the total of the whole."

"We may thus avoid all the ambiguity arising from the use of terms in a double sense by restricting the term frond to its legitimate definition, and employing special terms for the different parts of the frond itself. This method will prevail throughout the present work, and whenever the term frond is used it is to be understood as meaning the entire leaf, with or without a stalk. Whenever a stalk is present its presence will be recognized by the special term *stipe*, the equivalent of footstalk (Latin *stipes*, plural *stipites*), and the leafy portion will be called the *lamina* (plural *laminae*). Thus we shall have definitely fixed terms, with clearly defined limitations, no one of which can trespass upon the province of the other" (ex Mss. ined. 1881).—
GEORGE E. DAVENPORT, *Medford, Mass.*

DUPLICATION OF CONTRIBUTIONS.

To the Editors of the Botanical Gazette:—That European botanists may occasionally overlook contributions from laboratories on this side of the Atlantic if brought out in ephemeral or obscure journals is naturally to be expected. The American botanist, in turn, may be pardoned for similar mistakes, if not of too frequent occurrence, in regard to publications on the other side. The neglect of the literature bearing upon a distinctively American plant, to be found in the oldest and most widely known botanical journal in the country, is a fault not so easily condoned, however.

Dr. Homer Bowers published in the *BOTANICAL GAZETTE*¹ a thorough and accurate account of the morphology and life history of *Hydrastis Canadensis*, obtained by ten years of work upon the plant, under cultivation, and in its habitat in central Indiana.

Dr. Julius Pohl has recently duplicated this contribution in a manner which admits of no extenuation.² He worked upon a stock of material con-

¹ *BOT. GAZ.* 16:73. 1891.

² Botanische Mitteilung über *Hydrastis Canadensis*. *Bibliotheca Botanica* 29, 1894.